PowerCut™ 900/1600

PLASMA CUTTING EQUIPMENT

Powerful, durable, simple

The PowerCut™ plasma cutting package will take whatever you throw at it, and ask for more. Designed with ESAB technology, PowerCut™ machines are more powerful and durable than any other machine in their class. They also make plasma cutting easier and more economical – delivering reliability, high production, and a wide variety of performance features. With design features that simplify operation, reduce set-up time, and enhance consumable life, PowerCut™ packages let you spend less time trouble-shooting and more time cutting.

PowerCut™ gives you:

- **Powerful performance** – PowerCut™ offers the highest speeds and thickness capabilities in its price class, as well as high duty cycle ratings, for outstanding productivity and performance.

- **Powerful economy** – through a combination of long part life, high speeds, and simple torch design, the PowerCut™ series offers low cost per metre of cut.

- **Powerful durability** – these robust cutters stand up to rugged treatment and outdoor use, plus cut up to 25-35 mm metal with ease.

- **Powerful ease of operation** – with features such as the tool-less quick disconnect torch and a digital display, the PowerCut™ family is easy to set up and operate, increasing productivity and reducing downtime.

PowerCut™ features:

- **Rugged design** – PowerCut™'s external housing design is durable, damage-resistant, corrosion-resistant, and weather-resistant, while remaining lightweight for portability.

- **Tool-less quick disconnect torch** – disconnects from the machine without the use of wrenches or special tools. Now you can easily disconnect your PT-38 torch for storage, repairs, or replacement, or to attach a PT-37 mechanized torch for mechanized applications.

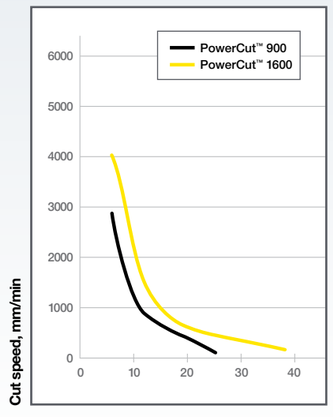
- **Digital display** – easy to read and shows the exact pressure or amperage, so you can operate with confidence. The display also shows help codes to assist in troubleshooting minor errors, reducing downtime. One example is the "Parts in place" code - the unit will not start if torch parts are not in the correct place.

- **Blowback technology** – has no high-frequency that can disrupt CNC controls and nearby computer systems.

- **Auto-modes (gouge, grate, and normal modes)** - switch between modes automatically, tailoring your application without manually changing settings on the power source.

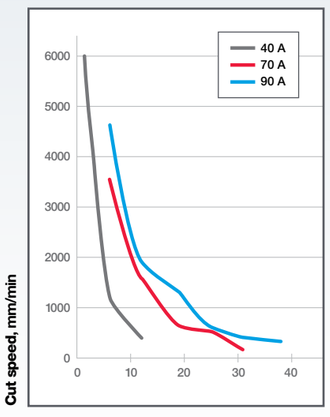
- **Suspended electronics** - sensitive internal electronics are suspended from the aluminum frame, insulating them from shock and vibration.

PT-38 cut speeds
Carbon Steel (Mild steel)



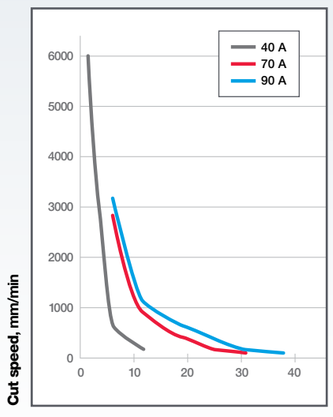
Thickness in Millimeters
Data collected using standard consumables and 50 bar Air

PT-38 cut speeds
Aluminum



Thickness in Millimeters
Data collected using standard consumables and 50 bar Air

PT-38 cut speeds
Stainless Steel



Thickness in Millimeters
Data collected using standard consumables and 50 bar Air

- **Sealed switches** – silicone-sealed switches are immune to corrosion, as well as dust and dirt infiltration.

- **Gouging capability** – PowerCut™ delivers the extra output voltage needed for superior plasma gouging capability.

- **Automatic fan control** – the cooling fan is automatically controlled to run only when necessary, to conserve energy and reduce ingested dust and dirt.

- **Trigger lock function (2/4 stroke)** - allows cutting long cuts without pressing torch trigger.

- **Built-in power line conditioner** – protects against damage from power line noise and spikes, even with poor-quality power.

- **Torch wrap and wear parts kit holder** – now standard on all packages, the holder lets you neatly fold up excess torch cables and has a convenient storage space for the wear part kit.

- **Mechanized option** – lets you easily transform your manual cutting system into a powerful mechanized system for your gantry machine.

Plasma cutting with PowerCut™ 1600

Plasma **Cutting**

What is plasma cutting?

Plasma is ionised molecules that are electrically conductive (in nature exists as lightning). Plasma has a concentrated arc at 25 000 degrees Celsius which is 5 times hotter than the surface of the sun. Therefore the arc can cut fast with low plate deformation.

Plasma cutting advantages to other methods

- Plasma gives fast and efficient cutting
- Plasma cutting gives a concentrated hot arc that transfers low heat input to the material cut resulting in less distortion
- This low heat input in combination with inverter technology gives low energy consumption
- Simple to work with - cuts straight lines or contours easily. Use templates, ruler or torch guides to cut straight lines, circles, etc.
- Plasma cuts all electrically conductive materials, such as aluminium, cast iron and high alloyed steels

Recommended cutting and gouging gases

Compressed air is the most commonly used gas for cutting metal thickness up to 40 mm. On aluminium and high alloyed steels compressed air gives a rougher edge and the face becomes oxidised and discoloured.

Why use gases when compressed air is cheaper?

Stainless and aluminium cutting or gouging using inert gas (N_2) instead of compressed air gives a smoother and cleaner cut face and prevents oxidisation (discolouring) of the material. Thereby most of the preparations prior to welding and lacquering can be reduced - increasing productivity.

Gouging

- Can be used after welding a root run and in preparation for the next run
- Removing material in order to weld on a hardfacing layer
- Removing weld faults
- Removing material when repairing a damaged part
- Plasma gouging can be carried out on materials (e.g. aluminium) that are normally difficult to gauge with other methods

(The torch PT-38 can easily be changed to gouging by changing wear parts)

Plasma contra carbon rod gouging

The advantages of using plasma gouging innstead of carbon rods are remarkable. You get approximately half the noise, about 50% fewer particles in the air, and arround 50% less energy consumption.

PowerCut™ products

PowerCut™ 900

Manual cut capacity

- Cuts 22 mm
- Severs 32 mm

Pierce capacity

- Maximum 13 mm

PowerCut™ 1600

Manual cut capacity

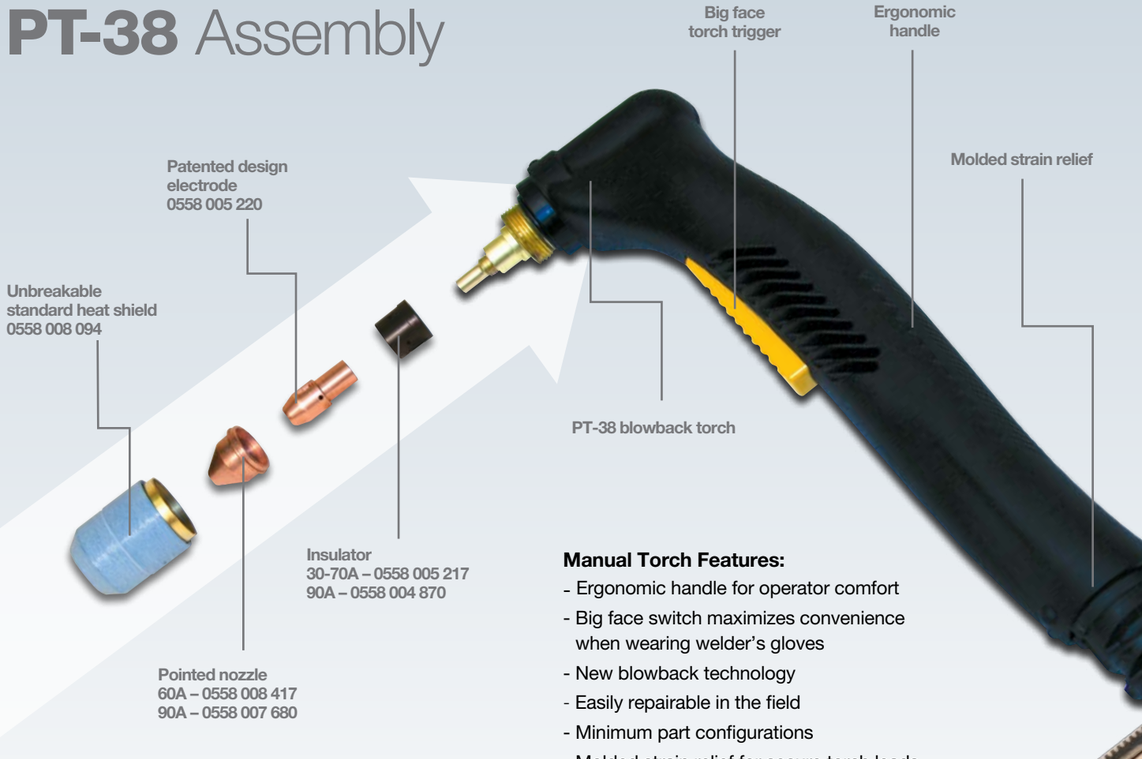
- Cuts 38 mm
- Severs 44 mm

Pierce capacity

- Maximum 19 mm

Auto-mode allows grate cutting without any additional settings or accessories.

PT-38 Assembly


Big face torch trigger
Ergonomic handle
Molded strain relief
Patented design electrode 0558 005 220
Unbreakable standard heat shield 0558 008 094
PT-38 blowback torch
Insulator 30-70A – 0558 005 217 90A – 0558 004 870
Pointed nozzle 60A – 0558 008 417 90A – 0558 007 680

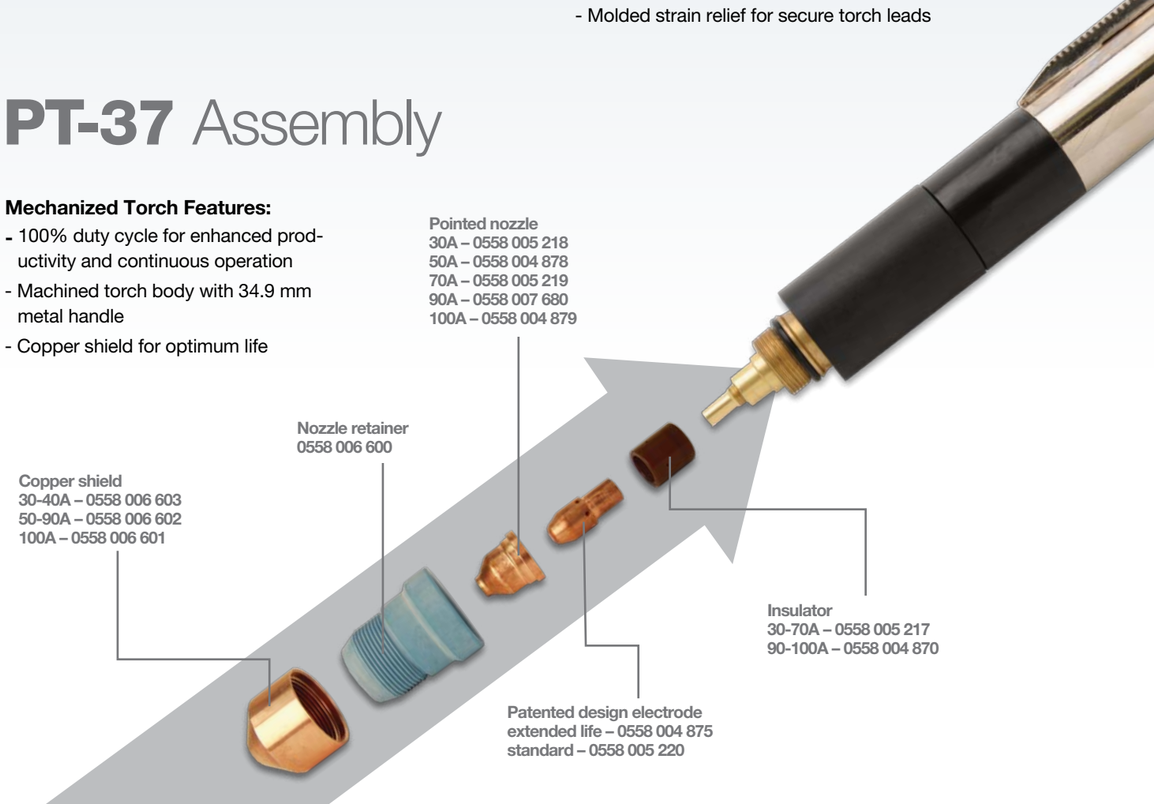
Manual Torch Features:

- Ergonomic handle for operator comfort
- Big face switch maximizes convenience when wearing welder's gloves
- New blowback technology
- Easily repairable in the field
- Minimum part configurations
- Molded strain relief for secure torch leads

PT-37 Assembly

Mechanized Torch Features:

- 100% duty cycle for enhanced productivity and continuous operation
- Machined torch body with 34.9 mm metal handle
- Copper shield for optimum life



Plasma cutting with PowerCut™ 1600

Technical data

	PowerCut™ 900	**PowerCut™ 1600**
MANUAL CUT CAPACITY		
CUT	**25 mm**	**38 mm**
SEVER	**32 mm**	**45 mm**
MECHANIZED PIERCE CAPACITY MAXIMUM	**13 mm**	**19 mm**
OUTPUT CURRENT	**60A**	**90A**
INPUT VOLTAGE VERSIONS *	**208V-230V 1ph/3ph, 60Hz 230V 3ph, 50/60Hz, CE 460V 3ph, 50Hz 575V 3ph, 60Hz, CSA 400V 3ph, 50/60Hz, CE 230V 3ph, 50/60Hz, CE**	**208V-460V 1ph/3ph, 60Hz 575V 3ph, 60Hz, CSA 400V 3ph, 50/60Hz 400V 3ph, 50/60Hz, CE**
INPUT CURRENT	**208V 1ph: 56 208V 3ph: 28 230V 1ph: 47 230V 3ph: 23 400V 3ph, 14A**	**230V 1ph: 78 208V 3ph: 47 230V 3ph: 41 460V 3ph: 25 400V 3ph: 26 575V 3ph: 11**
DUTY CYCLE	**60% at 60A 100% at 50A**	**60% at 90A 3ph**
DIMENSIONS L X H X W	**643 mm X 361 mm X 312 mm**	**706 mm X 378 mm X 323 mm**
WEIGHT	**32 kg**	**41 kg**
GAS SUPPLY	**Air or N_2**	**Air or N_2**
FLOW RATE AND PRESSURE	**190 l/min at 5,5 bar**	**190 l/min at 5,5 bar**
TORCH LEAD LENGTHS	**7.6 m, 15.2 m**	**7.6 m, 15.2 m**
RECOMMENDED GENERATOR POWER	**1ph 208V 11.6kw 3ph 208V 10kw 1ph 230V 10.8kw 3ph 230V 9.1kw**	**1ph 230V 18kw 3ph 230V 16.5kw 3ph 460V 20kw**

Specifications subject to change without notice.

** Availability of voltages varies due to certifications, e.g. CSA, CE and local voltage demands*

Accessories

The PowerCut™ cart

This convenient cart features large rear wheels to easily transport your PowerCut™ around the shop. Its tilted configuration allows for easy viewing of the front display. The cart also provides extra cable wraps for your ground clamp and input cable.

Heavy-duty water separator

The heavy-duty water separator protects your machine by filtering dirt and moisture from severely contaminated lines. The separator comes ready to install on the back of your PowerCut™.

Remote hand switch

This convenient remote switch allows you to easily start and stop your cutting process in a mechanized application. This switch is for use only on non-CNC controlled cutting applications.

Mechanized kit

Connect your PowerCut™ machine directly to a CNC controlled cutting table for mechanized applications. This easy-to-use kit allows you to convert your manual system to a fully operable CNC cutting system.

Wear parts kit

Available for the PowerCut™ 900 and 1600, wear parts kits provide everything you need to keep your torch running. The package is less expensive than buying each part individually.

Torch guide kits

Cut circles and straight lines with ease with this handy torch guide kits.

Standoff guide and gouging wear parts
(Several options available. Ask your representative.)

The standoff guide ensures a consistent standoff distance from the plate, especially when following a template or straight edge. Gouging consumables optimize performance for gouging.

For more information on plasma accessories and other ESAB products go to www.esab.com and enter your national site.

Mechanized plasma cutting with PowerCut™ 900 and torch PT-37

World leader in welding and cutting technology and systems.

World leader in welding and cutting technology and systems

ESAB operates at the forefront of welding and cutting technology. Over one hundred years of continuous improvement in products and processes enables us to meet the challenges of technological advance in every sector in which ESAB operates.

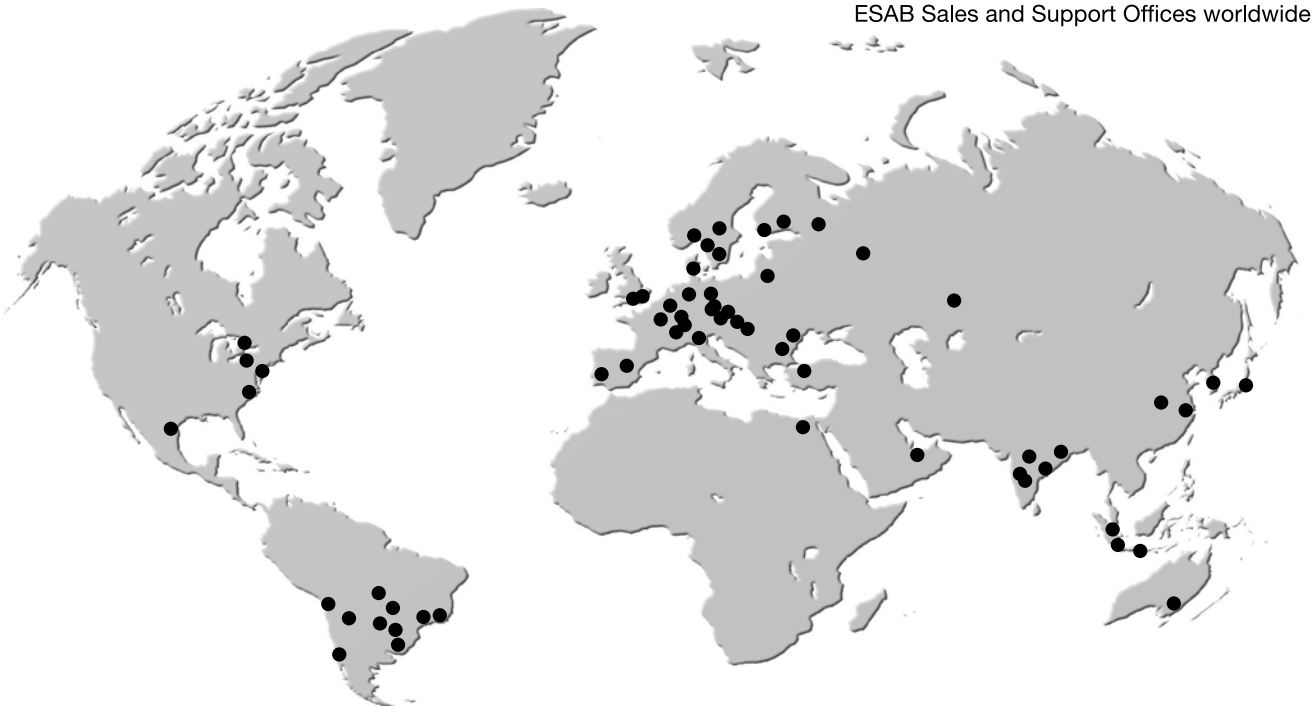
Quality and environment standards

Quality and the environment are two key areas of focus. ESAB is one of few international companies to have achieved the new ISO 14001 standard in Environmental Management Systems across all our global manufacturing facilities.

At ESAB, quality is an ongoing process that is at the heart of all our production processes and facilities worldwide.

Multinational manufacturing, local representation and an international network of independent distributors brings the benefits of ESAB quality and unrivalled expertise in materials and processes within reach of all our customers, wherever they are located.

ESAB Sales and Support Offices worldwide



* Includes manufacturing facilities of ESAB North America.
A wholly owned subsidiary of Anderson Group Inc.

STRENGTH THROUGH **COOPERATION**

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